

## ABSTRACT OF THE DISCLOSURE

A catalyst deterioration detecting apparatus aims at accurately determining whether or not a catalyst deteriorates even if a strict standard for catalyst deterioration is established. The catalyst deterioration detecting apparatus includes catalyst temperature sensing means for obtaining temperature of a catalyst, including ceria ( $\text{CeO}_2$ ) serving as an oxygen storage agent, and deterioration detecting means for detecting a degree of deterioration of the catalyst if the temperature is obtained by the catalyst temperature sensing means is equal to or higher than an activation temperature at which the catalyst is activated and is in a particular temperature range causing  $\text{NO}_x$  conversion efficiency of the catalyst to decrease.